

Atypical presentations of new onset diabetes – a possible cause of delayed diagnosis.

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Objectives In the UK, 25 - 38% of children with new onset diabetes present with diabetic ketoacidosis (DKA).

The objective of this study is to describe the varying presentations of new onset diabetes and the difficulties in recognising them amongst several undifferentiated children.

Methods The characteristics of children diagnosed with new onset diabetes from January to December 2023 presenting to a single centre were studied.

Results A total of 24/45 children presented with new onset diabetes and DKA during the study period. 18/24 presented with polyuria, polydipsia and/or weight loss.

However, There were six unusual presentations. Three children aged between 8-10 years presented with chest pain. The first child also presented with coryza, was diagnosed as a viral infection with costochondritis and discharged, returned 5 days later in DKA. Intensive teaching with a timeline of the presentation of this child was completed in the Emergency Department. Subsequently two children presented with chest pain as the main complaint. Parents did not give a history of polyuria or polydipsia in either case until specifically asked. Both were diagnosed with diabetes. One parent had T1DM which prompted investigation.

A 16 month old with known history of wheeze, presented with cough and difficulty in breathing. She was diagnosed with influenza A, diabetes and DKA.

A 10 year old, known asthmatic presented with wheeze. Her weight was 75 kg blood pressure 130 /90mmhg. Urine was tested to rule out renal disease and showed glucosuria and ketonuria. She was diagnosed with diabetes and DKA.

Conclusions

Children with new onset diabetes may not necessarily display all the classic symptoms of diabetes at the same time. Symptoms of a viral illnesses may overlap or co-exist with diabetes symptoms and prove to be confounding factors. Diagnosing new onset diabetes, especially in children who present atypically, amongst several undifferentiated children is not easy. We found

that case based discussions, investigating the timeline from the onset of symptoms to diagnosis and the health care seeking behaviour of parents in the weeks preceding diagnosis keeps awareness high. A low threshold for doing blood glucose in unwell children is recommended in acute care settings.